ABSTRACT OF THE DISCLOSURE

A method and apparatus by which digitized large frames of packets are sent between computer-based switches over a data network and central switch with greater efficiency than with existing digitized voice switching technology. Frame bundling combines the voice packets coming from different terminals into longer frames so that the number of frames and the overhead is reduced on the data network. Frame bundling may be done only with terminals that are connected to the same destination switch. The efficiency of this invention depends on the number of switches in the network and the amount of traffic between any pair of switches. Payload switching then sets up one or more central nodes that are connected to several other switches. The central node disassembles the large frames into the packets and reassembles the packets into large combined frames. The central node may be a voice packet switch. The disassembled and reassembled frames are sent to the destination switches from the central node. Without payload switching, frame bundling would not be used and there would be no reduction of overhead. With payload switching, switches are always sending their long frames of assembled voice packets to the central node, which builds new long frames of assembled packets according to runtime switching tables. These tables are set when calls are established across the network. This is similar to establishment of a phone call across the PSTN, except that the switched units are voice packets inside data frames, instead of timeslots inside TDM streams.